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Docket No.: GR 00 P 12246

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MAIL STOP: APPEAL BRIEF-PATENTS

By: _____ Date: June 15, 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Before the Board of Patent Appeals and Interferences

Applic. No.	:	09/883,817 Confirmation No.: 2567
Inventor	:	Jens Barrenscheen, et al.
Filed	:	June 18, 2001
Title	:	Method of Transmitting Data Between Devices Connected Via a Multi-Master Bus Defining a Time Slot During Transmission for Responsive Output Information from Non-Bus Master Devices
TC/A.U.	:	2112
Examiner	:	Clifford H. Knoll
Customer No.	:	24131

Hon. Commissioner for Patents
Alexandria, VA 22313-1450

SECOND SUPPLEMENTAL BRIEF ON APPEAL

S i r :

This is an appeal from the final rejection in the Office action dated May 9, 2005, finally rejecting claims 1-5, 7-28, 30-46 and 93-94, and additionally responding to a Notice of Non-Compliant Appeal Brief mailed May 15, 2006. The fee of $500.00 for the filing of an Appeal Brief was previously submitted on November 14, 2005.

Real Party in Interest:

This application is assigned to Infineon Technologies of München, Germany. The assignment will be submitted for recordation upon the termination of this appeal.

Related Appeals and Interferences:

No related appeals or interference proceedings are currently pending which would directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

Status of Claims:

Claims 1-5, 7-28, 30-46 and 93-94 are rejected and are under appeal. Claims 6, 29 and 47-92 were cancelled in an amendment dated September 28, 2004.

Status of Amendments:

No claims were amended after the final Office action. A *Response under 37 CFR § 1.116* was filed on August 9, 2005. The Primary Examiner stated in an *Advisory Action* dated August 19, 2005, that the request for reconsideration had been considered but did not place the application in condition for allowance.

Summary of the Claimed Subject Matter:

The subject matter of each independent claim is described in the specification of the instant application. Examples explaining the subject matter defined in each of the independent claims, referring to the specification by page and line numbers, and to the drawings, are given below .

Claim 1 recites a method of transmitting data between devices (Fig. 1, N1-Nn) interconnected via a bus (Fig. 1, BUS), which comprises:

transmitting, in units, data and information, concerning at least one of a transmission and a use of the data, from a first device to one or more second devices to which the data does not concern (see, page 24, line 18 - page 25, line 2; page 25, line 21 - page 26, line 4), and one or more third devices, to which the data does concern (see, page 24, lines 9 - 16; page 25, line 10 - 19); (See also, page 13, line 17 - page 14, line 21)

forming the units at least partly with at least one region (Fig. 2, REPLY) defining a given time slot page 17, lines 15 - 21) within which the second and third devices can output onto the bus specific information

and/or data (page 18, lines 1 - 22); (See also, page 13, line 22 - page 14, line 6; page 14, lines 11 - 15) and

defining, in the second and third devices, enabled for outputting data within the given time slot, settings (page 18, line 24 - page 20, line 19) selected from the group consisting of a setting to determine under which conditions information and/or data are to be output within the given time slot, a setting to determine which information and/or data are to be output within the given time slot, and a setting to determine at which points in time within the time slot the information and/or data are to be output(page 13, line 26 - page 14, line 6; page 14, lines 15 - 21).

Claim 24 recites a method of transmitting data between devices (Fig. 1, N1-Nn) interconnected via a bus (Fig. 1, BUS), which comprises:

transmitting, in units, data and information, concerning at least one of a transmission and a use of the data, from a first device to one or more second devices, to which the data is not intended (see, page 24, line 18 - page 25, line 2; page 25, line 21 - page 26, line 4), and one or more third devices, to which the data is intended

(see, page 24, lines 9 - 16; page 25, line 10 - 19); (See also, page 13, line 17 - page 14, line 21)

forming the units at least partly with at least one region (Fig. 2, REPLY) defining a given time slot (page 17, lines 15 - 21) within which the one or more second and third devices can output onto the bus information and/or data (page 18, lines 1 - 22); (See also, page 13, line 22 - page 14, line 6; page 14, lines 11 - 15) and

defining, in the first device, settings (page 18, line 24 - page 20, line 19) selected from the group consisting of a setting to determine which other devices have to output information and/or data within the given time slot, a setting to determine which information and/or data are to be output within the given time slot by the other devices, and a setting to determine at which points in time within the given time slot the other devices have to output the respective information and/or data (page 14, lines 15 - 21).

Claim 93 recites a method of transmitting data between devices (Fig. 1, N1-Nn) interconnected via a bus (Fig. 1, BUS), which comprises:

transmitting, in units, data and information, concerning at least one of a transmission and a use of the data, from a first device to one or more second devices to which the data does not concern (see, page 24, line 18 - page 25, line 2; page 25, line 21 - page 26, line 4), and one or more third devices, to which the data does concern (see, page 24, lines 9 - 16; page 25, line 10 - 19); (See also, page 13, line 17 - page 14, line 21)

forming the units at least partly with at least one region (Fig. 2, REPLY) defining a given time slot page 17, lines 15 - 21) within which the second and/or third devices can output onto the bus specific information and/or data (page 18, lines 1 - 22); (See also, page 13, line 22 - page 14, line 6; page 14, lines 11 - 15) and

defining, in the second and third devices, enabled for outputting data within the given time slot, settings (page 18, line 24 - page 20, line 19) selected from the group consisting of a setting to determine under which conditions information and/or data are to be output within the given time slot, a setting to determine which information and/or data are to be output within the given

time slot, and a setting to determine at which points in time within the time slot the information and/or data are to be output(page 13, line 26 - page 14, line 6; page 14, lines 15 - 21);

wherein the settings relating to the given time slot are variable settings (page 19, lines 11 - 17).

Claim 94 recites a method of transmitting data between devices (Fig. 1, N1-Nn) interconnected via a bus (Fig. 1, BUS), which comprises:

transmitting, in units, data and information, concerning at least one of a transmission and a use of the data, from a first device to one or more second devices, to which the data is not intended (see, page 24, line 18 - page 25, line 2; page 25, line 21 - page 26, line 4), and/or one or more third devices, to which the data is intended (see, page 24, lines 9 - 16; page 25, line 10 - 19); (See also, page 13, line 17 - page 14, line 21)

forming the units at least partly with at least one region (Fig. 2, REPLY) defining a given time slot (page 17, lines 15 - 21) within which the one or more second and/or third devices can output onto the bus information

and/or data (page 18, lines 1 - 22); (See also, page 13, line 22 - page 14, line 6; page 14, lines 11 - 15) and

defining, in the first device, settings (page 18, line 24 - page 20, line 19) selected from the group consisting of a setting to determine which other devices have to output information and/or data within the given time slot, a setting to determine which information and/or data are to be output within the given time slot by the other devices, and a setting to determine at which points in time the given time slot the other devices have to output the respective information and/or data (page 14, lines 15 - 21);

wherein the settings relating to the given time slot are variable settings (page 19, lines 11 - 17).

Grounds of Rejection to be Reviewed on Appeal

1. Whether or not claims 1 - 5, 8 - 28, 31 - 46 and 93 - 94 are anticipated by U. S. Patent No. 6,347,097 to Deng under 35 U.S.C. §102(e).

2. Whether or not claims 7 and 30 are obvious over U. S. Patent No. 6,347,097 to Deng, in view of U. S. Patent No. 6,212,633 to Levy under 35 U.S.C. §103.

Argument:

I. **Whether or not claims 1 - 5, 8 - 28, 31 - 46 and 93 - 94 are anticipated by U. S. Patent No. 6,347,097 to Deng under 35 U.S.C. §102(e).**

In item 1 of the final Office Action, mailed May 9, 2005 ("**the final Office Action**"), claims 1 - 5, 8 - 28, 31 - 46, 93 and 94 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U. S. Patent No. 6,347,097 to Deng ("**DENG**").

Appellants respectfully disagree.

A. **Appellants' claim 1 is patentable over the DENG reference.**

More particularly, Appellants' claim 1 recites, among other limitations,

> **transmitting, in units**, data and information, concerning at least one of a transmission of the data and a use of the data, from a first device to one or more second devices to which the data does not concern, and one or more third devices to which the data does concern;
>
> **forming the units** at least partly **with at least one region defining a given time slot within which the second and third devices can output onto the bus specific information and/or data**; [emphasis added by Appellants]

Appellants' specification and claims clearly shows that the "**units**" that are **formed** to include a region defining a time

slot within which the second and third devices can output information and/or data, are defined frames or messages, as shown in Fig. 2 of the instant application. More particularly, paragraphs [0049] and [0050] of the instant application state:

> The aforesaid units in which the data to be transmitted is transmitted together with information that is required or useful for the transmission and/or the use of the data and/or further information, are, for example, the frames or messages which are known from already existing bus systems. However, the frames or messages which are used in the method in question here have a structure different from conventional frames or messages.
>
> An example of the structure of a frame or a message which is used in the method in question here is illustrated in FIG. 2. [emphasis added by Appellants]

Fig. 2 of the instant application is reproduced below for convenience.

FIG 2

As can be seen from Fig. 2, Appellants' claimed frames or "units" include a field entitled "REPLY" which is part of the frame and which has a length defined as part of the definition

of the frame. This is supported in the instant application in paragraph [0051], which states:

> This frame or this message comprises a synchronization field SYN, an identifier field ID, a control field CTRL, a data field DATA, an error detection field CRC, and a reply field REPLY. [emphasis added by Appellants]

As noted above, Appellants' claim 1 requires, among other limitations, that both second devices to which the data does not concern and third devices to which the data does concern output data onto the bus during the time period of a "REPLY" field of a particular unit. This is further supported in the instant application in paragraph [0058], which states:

> The reply field REPLY is not filled with data, or at any rate only filled partially with data, by the device sending the frame or the message. This field thus defines a time slot in which the devices which are not bus master can, or must, output data onto the bus. Depending on the length of the time slot defined by the reply field, one or more bits can be transmitted via the bus in that time slot. [emphasis added by Appellants]

As such, all of Appellants' claims require, among other limitations: Frames/"units" transmitted by a first unit are formed to include at least one region defining a given time slot within which second devices to which the data does not concern and third devices to which the data does concern, can output onto the bus specific information and/or data. In other words, Appellants' claims require, among other things,

that the second and third devices output data onto the bus during a specific portion of a frame defined by the frame parameters, as sent by the first device.

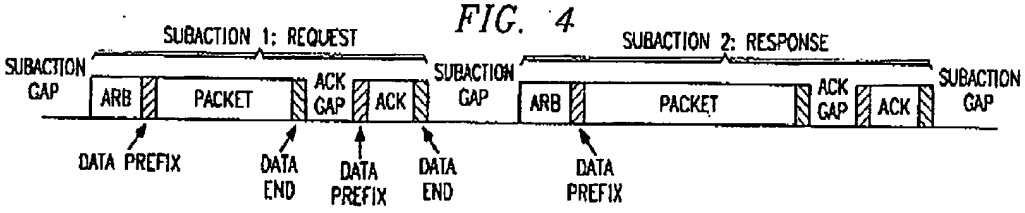
The DENG reference neither teaches, nor suggests, the transmission of such "units" or frames having a period defined by the frame sent by a first device, within which second devices to which the data does not concern *and* third devices to which the data does concern, can output information and/or data. More particularly, as set out in the response to the previous Office Action, that response being incorporated herein, DENG fails to teach or suggest that receivers downstream of the sender that are intended to receive the message and that are not intended to receive the message output information and/or data onto the bus during a period of the frame sent by the sender, as required by Appellants' claims. In fact, in DENG, only the device to which the message is intended transmits information and/or data onto the bus during the transmitted frame. DENG defines in its frame a period called the "ack-gap", during which the device for which the message is intended transmits information (i.e., an acknowledgement). This is supported by col. 6 of DENG, lines 34 - 43, which in relation to Fig. 4, states:

> Referring now to FIG. 4, there is illustrated a subaction in the link layer 52 for an asynchronous

transmission of a packet. This subaction is in the form of a request and a response. There is provided an arbitration sequence which is transmitted by a node that wishes to transmit a packet, this being transmitted to the physical layer 54 to gain control of the bus 58. The physical layer 54 may then respond immediately if it already controls the bus. This is followed by a data packet transmission which, for asynchronous subactions, involves the source node sending a data prefix signal (including a speed code, if needed), addresses of the source node and destination nodes, a transaction code, a transaction label, a retry code, data, one or two cyclic redundancy checks (CRCs), and a packet termination (either another data prefix or a data end signal). This is all followed by an acknowledgment field wherein a uniquely addressed destination returns a code indicating to the transmitting node the action taken by the packet receiver. [emphasis added by Appellants]

Fig. 4 of Deng is reproduced herebelow for convenience.

FIG. 4



DENG specifically teaches sending a data packet during a subaction gap, the data packet including a field (i.e., the "Ack-gap") in which **only a uniquely addressed destination returns a code**. This specifically differs from Appellants' claimed invention wherein a data packet/"unit" is sent including a field during which both **second devices to which the data does not concern and third devices to which the data does concern** output information and/or data.

In the Office Action, on page 2 of the Office Action, it is implied that the "**subaction gap**" of Fig. 4 of **DENG** is part of Appellants' claimed "units at least partly with at least one region defining a given time slot within which the devices transmitting no data can output data representing specific information". Appellants' respectfully disagree. As shown in Fig. 4 of **DENG** , the "subaction gap" **is not part of the transmitted data packet.** Note in Fig. 4 of **DENG** the brackets delimiting subaction 1 from subaction 2, **do not include the subaction gap**. That the "**subaction gap**" of **DENG** is not part of the transmitted data packet or defined by the transmitted data packet is further supported in col. 6 of **DENG**, lines 43 - 52, states:

> **Each of these asynchronous subactions is separated by periods of idle bus called "subaction gaps."** This gap is disposed between the packet transmission and acknowledgment reception. This "ack-gap" is of varying lengths depending upon where the receiver is on the bus with respect to the senders of the link request and acknowledgment (ack). **However, the maximum length of the ack-gap is sufficiently shorter than a subaction gap to ensure that other nodes on the bus will not begin arbitration before the acknowledgment has been received.** [emphasis added by Appellants]

The above portion of **DENG** sets out, both, that the **subaction gaps are not part of the data packet transmissions, nor defined as part of the frame/"unit", as required by**

Appellants' claim 1, and that the "ack-gap" of the subaction is set sufficiently short so that other devices do not use it to begin arbitration. Clearly, DENG fails to teach or suggest "units" sent by a first device including predefined time periods in the unit/frame during which both devices for which the message concerns/is intended and devices for which the message does not concern/is not intended output information and/or data, as required by Appellants' claim 1. Rather, the "subaction period" of DENG, as specifically shown in Fig. 4, is not part of the transmitted data packet or "unit", and is not a time period defined by the transmitted data packet or "unit". DENG does not teach or suggest that the data packet definition is what defines the length of the subaction gap. As such, although the DENG reference discloses a data packet including an "ack-gap" period, during which a device for which the message is intended outputs "a code", DENG neither teaches, nor suggests, a time period as part of the data packet or unit, and defined by the data packet or unit, during which a device for which the message is not intended, outputs information and/or data.

Further, in the Advisory Action mailed August 19, 2005, it is alleged that the combination of the subaction gap and the subsequent arbitration period of DENG somehow teach or suggest Appellants' particularly claimed "units". However,

Appellants' respectfully disagree. Among other things, it is alleged in the Advisory Action that:

> Applicant further argues that in Deng "only a uniquely addressed destination returns a code" (p. 7); however this neglects the action of the arbitration period, where "devices to which the data does not concern" in fact sends data. Deng's sub-action gap and subsequent arbitration period collectively comprise a defined "region" for both devices (those the data concerns and does not concern).

However, **DENG**'s subaction gap and subsequent arbitration period are part of the response portion of the request/response pair for the subaction of Fig. 4 of **DENG**. As stated in col. 2 of **DENG**, lines 40 - 51:

> **The transaction layer defines a complete request-response protocol to perform the bus transactions** required to support the CSR architecture (control and status registers). This provides operations of read, write and lock. The link layer 52 provides an acknowledge datagram (a one-way data transfer with confirmation of request) service to the transaction layer 50. It provides addressing, data checking, and data framing for packet transmission and reception. The link layer 52 also provides an isochronous data transfer service directly to the application, including the generation of a "cycle" signal utilized for timing and synchronization. **One link layer transfer is called a "subaction."** [emphasis added by Appellants]

Further, as stated in col. 6 of **DENG**, lines 26 - 28:

> Referring now to FIG. 4, there is illustrated a subaction in the link layer 52 for an asynchronous transmission of a packet. **This subaction is in the form of a request and a response.** [emphasis added by Appellants]

As further stated in col. 6 of **DENG**, lines 53 - 67:

> Referring now to FIG. 5, there is illustrated a diagrammatic view of the manner in which the link layer 52 services a request. **As noted above, the link layer 52 utilizes the request, indication, response and confirmation service primitives. The request primitive is utilized by a link requestor to transfer the packet to a link responder.** An indication primitive indicates the reception of a packet by a link responder. **A response primitive indicates the transmission of an acknowledgment by a link responder,** and the confirmation primitive indicates the reception of the acknowledgment by the link requestor. Once the link request has been made, the system goes through an arbitration and packet transmission **to the receiving node, which then provides a response back in the form of an acknowledgment to the requesting link layer, which will then confirm transmission.** [emphasis added by Appellants]

As such, piecing together from the description of **DENG** the complete **subaction** of Figs. 4 and 5 of **DENG**, it can be seen that the subaction gap and subsequent arbitration period, located **between** the request and the response, **are present solely for a response to come from the link responder**, i.e., a device to which the packet was intended. As such, contrary to the allegation made in the Advisory Action, the subaction gap and subsequent arbitration period in the subaction of Fig. 4 are not "units" sent by a first device including predefined time periods **in the unit/frame** during which **both devices for which the message concerns/is intended and devices for which the message does not concern/is not intended output information and/or data, as required by Appellants' claim 1.**

Rather, it appears from **DENG**, that the device for which the information is intended is the only device that responds during the subaction gap and subsequent arbitration period (i.e., hence the heading "Subaction 2: Response" in Fig. 4 of **DENG**), and **devices for which the message does not concern/is not intended do not output information and/or data during those times.**

In view of the foregoing, Appellants' believe that the **DENG** reference neither teaches, nor suggests, all of the limitations of Appellants' independent claim 1. As such, Appellants' claim 1 is believed to be patentable over the **DENG** reference.

B. Appellants' independent claims 24, 93 and 94 are patentable over the DENG reference.

Appellants' independent claims 24, 93 and 94 recite similar limitations to those cited above in connection with claim 1.

For example, Appellants' independent claim **24** recites, among other limitations:

> **transmitting, in units**, data and information, concerning at least one of a transmission and a use of the data, from a first device to one or more second devices, **to which the data is not intended**, and one or more third devices, **to which the data is intended**;

forming the units at least partly with at least one region defining a given time slot within which the one or more second and third devices can output onto the bus information and/or data; [emphasis added by Appellants]

Appellants' independent claim 93 recites, among other limitations:

transmitting, in units, data and information, concerning at least one of a transmission and a use of the data, from a first device to one or more second devices to which the data does not concern, and/or one or more third devices, to which the data does concern;

forming the units at least partly with at least one region defining a given time slot within which the second and/or third devices can output onto the bus specific information and/or data; [emphasis added by Appellants]

Further, Appellants' independent claim 94 recites, among other limitations:

transmitting, in units, data and information, concerning at least one of a transmission and a use of the data, from a first device to one or more second devices, to which the data is not intended and/or one or more third devices, to which the data is intended;

forming the units at least partly with at least one region defining a given time slot within which the one or more second and/or third devices can output onto the bus information and/or data; [emphasis added by Appellants]

As stated above in section A, that section incorporated herein, **DENG** fails to teach or suggest, among other limitations of Appellants' claims, "units" sent by a first device including predefined time periods in the unit/frame

during which both devices for which the message concerns/is intended and devices for which the message does not concern/is not intended output information and/or data, as required by Appellants' claims.

As such, it is believed that Appellants' independent claims 24, 93 and 94 are additionally patentable over the DENG reference.

II. Whether or not claims 7 and 30 are obvious over U. S. Patent No. 6,347,097 to Deng, in view of U. S. Patent No. 6,212,633 to Levy under 35 U.S.C. §103.

In item 2 of the final Office Action, claims 7 and 30 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over DENG in view of U. S. Patent No. 6,212,633 to Levy ("LEVY").

Appellants respectfully disagree.

Appellants believe that the LEVY reference, cited in combination with DENG against certain of Appellants' dependent claims, additionally fails to teach or suggest the above described elements of Appellants' independent claims missing from the DENG reference, among others. As such, DENG, alone,

or in combination with **LEVY**, fails to teach or suggest Appellants' claimed invention of dependent claims 7 and 30.

III. Conclusion.

It is accordingly believed that none of the references, whether taken alone or in any combination, teach or suggest the features of claims 1, 24, 93 and 94. Claims 1, 24, 93 and 94 are, therefore, believed to be patentable over the art. The dependent claims, including claims 7 and 30, are believed to be patentable as well because they all are ultimately dependent on claims 1 or 24.

The honorable Board is therefore respectfully urged to reverse the final rejection of the Primary Examiner.

Respectfully submitted,

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Claims Appendix:

1. A method of transmitting data between devices interconnected via a bus, which comprises:

transmitting, in units, data and information, concerning at least one of a transmission and a use of the data, from a first device to one or more second devices to which the data does not concern, and one or more third devices, to which the data does concern;

forming the units at least partly with at least one region defining a given time slot within which the second and third devices can output onto the bus specific information and/or data; and

defining, in the second and third devices, enabled for outputting data within the given time slot, settings selected from the group consisting of a setting to determine under which conditions information and/or data are to be output within the given time slot, a setting to determine which information and/or data are to be output within the given time slot, and a setting to determine at which points in time within the time slot the information and/or data are to be output.

2. The method according to claim 1, which comprises determining the settings relating to the given time slot before a start of the transmission of the unit containing the given time slot.

3. The method according to claim 1, which comprises determining the settings relating to the given time slot with one or more of the devices connected to the bus.

4. The method according to claim 1, which comprises determining the settings relating to the given time slot based on one of data and instructions transmitted to the respective devices via the bus.

5. The method according to claim 1, which comprises determining the settings relating to the given time slot upon initializing the devices.

7. The method according to claim 1, which comprises storing the settings relating to the given time slot in nonvolatile memory devices.

8. The method according to claim 1, wherein the units for transmitting the data and the information concerning the transmission or the use of the data are frames.

9. The method according to claim 1, wherein the units for transmitting the data and the information concerning the transmission or the use of the data are messages.

10. The method according to claim 1, wherein the units in which the data to be transmitted are transmitted together with the information which is required or useful for the transmission and/or the use of the data is transmitted in each case serially via the bus at a specific transmission clock rate.

11. The method according to claim 1, which comprises determining with the data and information contained in the units containing the data and information required or useful for the transmission or the use of the data, whether certain devices output information onto the bus and at which points in time.

12. The method according to claim 11, which comprises determining with the data and information contained in the units which devices output information onto the bus.

13. The method according to claim 1, which comprises defining the given time slot for transmission of one or more bits via the bus.

14. The method according to claim 1, wherein the data to be output onto the bus during the given time slot comprise a positive acknowledge bit indicating that the device outputting the acknowledge bit onto the bus has previously received in a fault-free condition data transmitted via the bus.

15. The method according to claim 14, wherein the one or more second and/or third devices which are connected to the bus are set in such a way that exclusively, the one or more third devices, for which the data transmitted via the bus are intended, acknowledge the fault-free reception of the data by outputting a positive acknowledge bit onto the bus.

16. The method according to claim 14, wherein, if a plurality of the devices connected to the bus are set in such a way that they have to acknowledge the fault-free reception of the data by outputting a positive acknowledge bit, the plurality of devices are set such that the positive acknowledge bits are output by the plurality of devices at different points in time.

17. The method according to claim 15, wherein the devices connected to the bus are set such that the one or more second devices, for which the data transmitted via the bus is not intended, do not output any data onto the bus at least at the points in time at which the one or more third devices, for which the data transmitted via the bus is intended, must be able to acknowledge the fault-free reception of the data.

18. The method according to claim 1, wherein the data to be output onto the bus during the given time slot comprise a negative acknowledge bit indicating that the device outputting the negative acknowledge bit onto the bus has previously not received in a fault-free condition data transmitted via the bus.

19. The method according to claim 18, wherein the devices connected to the bus are set such that exclusively, the one or more third devices, for which the data transmitted via the bus is intended, signal a non-fault-free reception of the data by outputting a negative acknowledge bit onto the bus.

20. The method according to claim 18, wherein if a plurality of the devices connected to the bus are set such that they have to signal the non-fault-free reception of the data by

outputting a negative acknowledge bit, at least some of the plurality of the devices are set such that they output at the same time the negative acknowledge bits that are to be output if at least some of the plurality of devices receive non-fault-free data.

21. The method according to claim 18, wherein the devices connected to the bus are set such that the at least one second device, for which the data transmitted via the bus is not intended, does not output any data onto the bus at least at the points in time at which the at least one third device, for which the data transmitted via the bus is intended, must be able to signal the non-fault-free reception of the data.

22. The method according to claim 1, wherein the devices connected to the bus are set such that individual devices, a plurality of devices, or all the devices connected to the bus output a positive acknowledge bit onto the bus at different points in time within the given time slot if the devices have received in a fault-free condition data previously transmitted via the bus, or they output a negative acknowledge bit if the opposite is the case, in each case at other, different points in time within the given time slot.

23. The method according to claim 1, wherein the devices connected to the bus are set such that a content of the current frame or of a specific preceding frame or the content of the current message or of a specific preceding message determines which of the devices has to output which information onto the bus at which point in time.

24. A method of transmitting data between devices interconnected via a bus, which comprises:

transmitting, in units, data and information, concerning at least one of a transmission and a use of the data, from a first device to one or more second devices, to which the data is not intended, and one or more third devices, to which the data is intended;

forming the units at least partly with at least one region defining a given time slot within which the one or more second and third devices can output onto the bus information and/or data; and

defining, in the first device, settings selected from the group consisting of a setting to determine which other devices have to output information and/or data within the given time slot, a setting to determine which information and/or data are to be output within the given time slot by

the other devices, and a setting to determine at which points in time within the given time slot the other devices have to output the respective information and/or data.

25. The method according to claim 24, which comprises determining the settings relating to the given time slot before a start of the transmission of the unit containing the given time slot.

26. The method according to claim 24, which comprises determining the settings relating to the given time slot with one or more of the devices connected to the bus.

27. The method according to claim 24, which comprises determining the settings relating to the given time slot based on one of data and instructions transmitted to the respective devices via the bus.

28. The method according to claim 24, which comprises determining the settings relating to the given time slot upon initializing the devices.

30. The method according to claim 24, which comprises storing the settings relating to the given time slot in nonvolatile memory devices.

31. The method according to claim 24, wherein the units for transmitting the data and the information concerning the transmission or the use of the data are frames.

32. The method according to claim 24, wherein the units for transmitting the data and the information concerning the transmission or the use of the data are messages.

33. The method according to claim 24, wherein the units in which the data to be transmitted are transmitted together with the information which is required or useful for the transmission and/or the use of the data is transmitted in each case serially via the bus at a specific transmission clock rate.

34. The method according to claim 24, which comprises determining with the data and information contained in the units containing the data and information required or useful for the transmission or the use of the data, whether certain devices output information onto the bus and at which points in time.

35. The method according to claim 34, which comprises determining with the data and information contained in the units which devices output information onto the bus.

36. The method according to claim 24, which comprises defining the given time slot for transmission of one or more bits via the bus.

37. The method according to claim 24, wherein the data to be output onto the bus during the given time slot comprise a positive acknowledge bit indicating that the device outputting the acknowledge bit onto the bus has previously received in a fault-free condition data transmitted via the bus.

38. The method according to claim 37, wherein the devices which are connected to the bus are set in such a way that exclusively devices for which the data transmitted via the bus are intended acknowledge the fault-free reception of the data by outputting a positive acknowledge bit onto the bus.

39. The method according to claim 37, wherein, if a plurality of the devices connected to the bus are set in such a way that they have to acknowledge the fault-free reception of the data by outputting a positive acknowledge bit, the

plurality of devices are set such that the positive acknowledge bits, which are to be output if at least some of the plurality of devices receive fault-free data, are output by the plurality of devices at different points in time.

40. The method according to claim 38, wherein the devices connected to the bus are set such that the one or more second devices, for which the data transmitted via the bus is not intended, do not output any data onto the bus at least at the points in time at which the one or more third devices, for which the data transmitted via the bus is intended, must be able to acknowledge the fault-free reception of the data.

41. The method according to claim 24, wherein the data to be output onto the bus during the given time slot comprise a negative acknowledge bit indicating that the device outputting the negative acknowledge bit onto the bus has previously not received in a fault-free condition data transmitted via the bus.

42. The method according to claim 41, wherein the devices connected to the bus are set such that exclusively, the one or more third devices, for which the data transmitted via the bus is intended, signal a non-fault-free reception of the data by outputting a negative acknowledge bit onto the bus.

43. The method according to claim 41, wherein if a plurality of the devices connected to the bus are set such that they have to signal the non-fault-free reception of the data by outputting a negative acknowledge bit, at least some of the plurality of the devices are set such that they output at the same time the negative acknowledge bits that are to be output if at least some of the plurality of devices receive non-fault-free data.

44. The method according to claim 41, wherein the devices connected to the bus are set such that the at least one second device, for which the data transmitted via the bus is not intended, does not output any data onto the bus at least at the points in time at which the at least one third device, for which the data transmitted via the bus is intended, must be able to signal the non-fault-free reception of the data.

45. The method according to claim 24, wherein the devices connected to the bus are set such that individual devices, a plurality of devices, or all the devices connected to the bus output a positive acknowledge bit onto the bus at different points in time within the given time slot if the devices have received in a fault-free condition data previously transmitted via the bus, or they output a negative

acknowledge bit if the opposite is the case, in each case at other, different points in time within the given time slot.

46. The method according to claim 24, wherein the devices connected to the bus are set such that a content of the current frame or of a specific preceding frame or the content of the current message or of a specific preceding message determines which of the devices has to output which information onto the bus at which point in time.

93. A method of transmitting data between devices interconnected via a bus, which comprises:

transmitting, in units, data and information, concerning at least one of a transmission and a use of the data, from a first device to one or more second devices to which the data does not concern, and/or one or more third devices, to which the data does concern;

forming the units at least partly with at least one region defining a given time slot within which the second and/or third devices can output onto the bus specific information and/or data; and

defining, in the second and third devices, enabled for

outputting data within the given time slot, settings selected from the group consisting of a setting to determine under which conditions information and/or data are to be output within the given time slot, a setting to determine which information and/or data are to be output within the given time slot, and a setting to determine at which points in time within the time slot the information and/or data are to be output;

wherein the settings relating to the given time slot are variable settings.

94. A method of transmitting data between devices interconnected via a bus, which comprises:

transmitting, in units, data and information, concerning at least one of a transmission and a use of the data, from a first device to one or more second devices, to which the data is not intended and/or one or more third devices, to which the data is intended;

forming the units at least partly with at least one region defining a given time slot within which the one or more second and/or third devices can output onto the bus information and/or data; and

defining, in the first device, settings selected from the group consisting of a setting to determine which other devices have to output information and/or data within the given time slot, a setting to determine which information and/or data are to be output within the given time slot by the other devices, and a setting to determine at which points in time the given time slot the other device have to output the respective information and/or data;

wherein the settings relating to the given time slot are variable settings.

Evidence Appendix:

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or any other evidence has been entered by the Examiner and relied upon by appellant in the appeal.

Related Proceedings Appendix:

Since there are no prior or pending appeals, interferences or judicial proceedings which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this appeal, no copies of decision rendered by a court or the Board are available.